

Mineral Industry Surveys

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MOLYBDENUM IN JUNE 2003

Domestic production of molybdenum in concentrate in June 2003 was about 25% less than that of the previous month and was about 28% less than that of June 2002, according to the U.S. Geological Survey. Year-to-date production of molybdenum in concentrate from January through June was about 7% more than during the same period in 2002. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 8,250 metric tons (t) at the beginning of 2003 and 5,181 t at the end of June.

According to Ryan's Notes (2003c), the June monthly averages for U.S. ferromolybdenum (FeMo) prices ranged from \$5.919 to \$6.119 per pound of molybdenum content, as compared with \$5.472 to \$5.706 in May. European FeMo monthly averages ranged from \$13.281 to \$13.650 per kilogram of molybdenum content in June as compared with \$13.433 to \$13.750 in May. In June, worldwide molybdenum oxide prices ranged from \$5.500 to \$5.763 per pound versus \$5.461 to \$5.644 in May.

FeMo prices softened during June after the strong gains posted in May (Ryan's Notes, 2003b). European FeMo prices were booked at \$13.15 to \$13.30 per kilogram and Chinese material was booked at just over \$11 per kilogram. U.S. FeMo traded at about \$6 per pound. Molybdenum oxide prices settled at about \$5.50 per pound after starting the month at about \$6 per pound. Most traders expect molybdenum oxide prices to hold and that FeMo prices will rise to be more in line with molybdenum oxide prices (Ryan's Notes, 2003a).

Shipments of Chinese FeMo to Europe have decreased since the European Union imposed an antidumping duty on Chinese FeMo last year (Ryan's Notes, 2003b). In March, Chinese exports to Asian countries exceeded exports to Europe for the first time. Of the Asian countries, Japan received the most FeMo, followed by Korea and Taiwan. While Chinese FeMo exports to Europe have decreased, FeMo exports from Armenia to Europe have increased from 156 t in 1997 to 1,464 t in 2002, and FeMo exports from Iran to Europe have increased from 50 t in 1997 to 11,289 t in 2002. Armenia and Iran have shifted to production of downstream products; previously, concentrates produced in those countries were shipped to Russia for processing (Ryan's Notes, 2003a).

By the beginning of June, about 12 mines in the Huludao region, China, had resumed molybdenum production after passing safety inspections in the wake of two incidents in early May. Roughly 120 of the 200 mines in the region are expected to be restarted by the end of the month. The remaining 80 mines are not expected to pass inspection and could be mothballed or go bankrupt. Production capacity in the Huludao region is expected to decrease by about 20% as a result of the closures (Ryan's Notes, 2003b).

References Cited

- Ryan's Notes, 2003a, Chinese FeMo shipments to Europe: Ryan's Notes, v. 9, no. 25, June 23, p. 4.
Ryan's Notes, 2003b, Moly wobbles: Ryan's Notes, v. 9, no. 24, June 16, p. 2-3.
Ryan's Notes, 2003c, [untitled]: Ryan's Notes, v. 9, no. 27, July 7, p. 4.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS¹

(Metric tons, contained molybdenum)

	2002	2003		
	January- December ^p	May ^f	June	Year to date
Production	32,400	2,560	1,930	15,900
Shipments: ²				
Domestic	21,200	1,670	1,100	9,760
Export	11,100	803	778	5,820

^pPreliminary. ^fRevised.

¹Data are rounded to no more than three significant digits.

²As reported by producers.

TABLE 2
U.S. REPORTED PRODUCTION AND SHIPMENTS OF MOLYBDENUM
PRODUCTS¹

(Metric tons, contained molybdenum)

	2002	2003		
	January- December ^p	May	June	Year to date
Gross production	31,300	3,300	3,440	18,900
Internal consumption ²	20,700	2,090	2,330	14,000
Gross shipments	27,500	2,690	2,170	14,000

^pPreliminary.

¹Data are rounded to no more than three significant digits.

²Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate, and other.

TABLE 3
U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS¹

(Kilograms, contained molybdenum)

End use	Molybdic oxides	Ferro molyb- denum ²	Ammonium and sodium molybdate	Molyb- denum scrap	Other	Total
2003, May:						
Steel:						
Carbon	12,300	W	--	--	W	12,300
High-strength low-alloy	30,200	7,790	--	--	--	38,000
Stainless and heat-resisting	118,000	69,700	--	--	7,180	195,000
Full alloy	92,500	168,000	--	--	1,920	263,000
Tool	68,600	W	--	--	W	68,600
Total	322,000	246,000	--	--	9,100	577,000
Cast irons (gray, malleable, and ductile iron)	W	18,900	--	--	763	19,600
Superalloys	47,300	W	--	(3)	107,000 ^r	155,000 ^r
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	327	600	--	--	2,970	3,890
Mill products made from metal powder ⁴	--	--	--	--	85,000	85,000
Cemented carbides and related products ⁵	--	--	--	--	9	9
Chemical and ceramic uses:						
Pigments	--	--	W	--	W	W
Catalysts	77,300	--	W	--	W	77,300
Other	--	--	--	--	--	--
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	15,300	15,300
Other	1,090	29,300 ^r	76,100	--	18,000	125,000
Grand total	448,000	295,000	76,100	--	238,000	1,060,000
Stocks, May 31, 2003	384,000	236,000	5,650	39,900	862,000	1,530,000
2003, June:						
Steel:						
Carbon	11,100	W	--	--	W	11,100
High-strength low-alloy	32,800	8,990	--	--	--	41,800
Stainless and heat-resisting	144,000	73,300	--	--	7,180	224,000
Full alloy	118,000	161,000	--	--	1,910	282,000
Tool	69,300	W	--	--	W	69,300
Total	375,000	244,000	--	--	9,090	628,000
Cast irons (gray, malleable, and ductile iron)	W	17,500	--	--	763	18,200
Superalloys	61,900	W	--	(3)	117,000	179,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	313	3,420	--	--	2,970	6,700
Mill products made from metal powder ⁴	--	--	--	--	86,300	86,300
Cemented carbides and related products ⁵	--	--	--	--	8	8
Chemical and ceramic uses:						
Pigments	--	--	W	--	W	W
Catalysts	77,300	--	W	--	W	77,300
Other	--	--	--	--	--	--
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	13,700	13,700
Other	1,090	40,000	76,600	--	18,100	136,000
Grand total	516,000	304,000	76,600	--	248,000	1,140,000
Stocks, June 30, 2003	327,000	210,000	4,220	42,500	865,000	1,450,000

¹Revised. W Withheld to avoid disclosing company proprietary data; included in "Other" of the "Miscellaneous and unspecified uses" category. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes calcium molybdate.

³Included in "Other" of the "Superalloys" category.

⁴Includes ingot, wire, rod, and sheet.

⁵Includes construction, mining, oil and gas, metal working machinery.

TABLE 4
U.S. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES
(including roasted concentrate), BY COUNTRY¹

(Kilograms, contained molybdenum)

Country	2002	2003		
	January- December ^p	April	May	Year to date
Australia	46,900	3,540	6,000	24,000
Belgium	4,380,000	376,000	257,000	1,240,000
Brazil	32,600	4,800	8,200	24,100
Canada	1,080,000	55,600	38,800	487,000
Chile	16,200	6,040	--	14,200
China	56,700	--	--	--
Germany	64,400	1,440	--	1,440
India	141,000	--	--	11,300
Italy	47,900	9,520	--	15,200
Japan	1,130,000	359,000	146,000	886,000
Korea, Republic of	70,600	6,800	9,420	31,100
Mexico	484,000	123,000	459,000	1,730,000
Netherlands	7,330,000	913,000	854,000	3,480,000
Spain	41,200	--	--	--
Sweden	35,000	10,900	--	20,500
Taiwan	12,600	--	--	9,590
United Kingdom	4,330,000	514,000	443,000	2,220,000
Other	153,000	5,240	41,200	73,300
Total	19,500,000	2,390,000	2,260,000	10,300,000

^pPreliminary. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY¹

(Kilograms, contained molybdenum)

Country	2002	2003		
	January- December ^p	April	May	Year to date
Australia	--	--	273	546
Canada	597,000	5,720	16,000	161,000
Chile	240	--	--	--
Denmark	5,110	--	--	--
Japan	--	--	--	61
Mexico	51,400	--	--	7,590
Netherlands	--	--	--	25,500
Switzerland	21,800	--	--	--
Taiwan	274	--	--	--
Total	676,000	5,720	16,300	195,000

^pPreliminary. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF MOLYBDENUM PRODUCTS¹

(Kilograms, unless otherwise specified)

Material	January-December 2002 ^P			May 2003		
	Gross weight	Contained molybdenum	Value (c.i.f.) (thousands)	Gross weight	Contained molybdenum	Value (c.i.f.) (thousands)
Ore and concentrates roasted	7,030,000	4,370,000	\$33,500	307,000	193,000	\$1,800
Ore and concentrates other	664,000	340,000	3,450	164,000	76,800	767
Molybdenum chemicals:						
Oxides and hydroxides	1,200,000	NA	7,660	51,900	NA	372
Molybdates of ammonium	1,740,000	1,010,000	11,200	222,000	131,000	1,480
Molybdates (all others)	435,000	88,600	1,630	22,200	1,550	49
Molybdenum orange	1,300,000	NA	5,490	115,000	NA	418
Ferromolybdenum	5,570,000	3,590,000	31,400	564,000	364,000	3,560
Molybdenum powders	39,500	31,700	1,110	6,060	4,760	154
Molybdenum unwrought	43,500	43,200	542	15,000	14,900	166
Molybdenum waste and scrap	697,000	617,000	6,910	39,800	39,400	441
Molybdenum wire	14,600	NA	697	494	NA	43
Molybdenum other	84,800	NA	7,240	4,020	NA	411
Total	18,800,000	10,100,000	111,000	1,510,000	825,000	9,660

^PPreliminary. NA Not available. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.